hygiene based upon psychological principles, especially as the book is intended for normal and high school students. A few minor inaccuracies also and inadvertencies of expression might well receive attention in another edition; *e. g.*, on p. 33 it seems to be implied that imagination is dependent on changes of blood supply, on pp. 44-45 in considering giddiness the otolith organs are mentioned, but the semicircular canals are not, and on p. 50 the intensity of moonlight is taken much too high. The book is valuable enough, however, to carry off many more than these deficiencies, and will, no doubt, prove extremely helpful even to many above the level for which it was first designed. E. C. S.

The Influence of High Arterial Pressures Upon the Blood-Flow Through the Brain. W. H. HOWELL. American Journal of Physiology, I. (1898), 57-70.

The physiology of the cerebral circulation is a difficult and obscure matter, and has been made even more difficult of comprehension by the supposition that, because the brain itself is practically incompressible and encased in an inextensible skull, any enlargement of the arteries under increased blood pressure must bring about a corresponding compression of the veins, which would hinder the outflow of the blood, and, in case of a sudden and great rise of arterial pressure, might produce anæmia by preventing it altogether. Recent experiments by several observers, however, have made clear that this reasoning was somewhere at fault, for when the arterial pressure in living animals has been made very high by the administration of drugs, the outflow has not been diminished. Prof. Howell has carried these experiments further, and, it would seem, entirely closed the question by showing in the case of dogs previously killed, that even very great pressures (*e.g.*, 500 mm. of mercury, or about 9.7 lbs. per square inch) do not cause any decrease of the outflow from the cerebral veins; in other words that "the circulation in the braiu behaves in this respect precisely as it does in the other organs of the body; the greater the arterial pressure the more abundant is the flow of blood." The arterial enlargement is indeed compensated by compression of the veins (and they even show a pulse, due, apparently, to the increase of compression at each arterial pulse) but their total bore is considerably greater than that of the arteries, so that they are never seriously occluded, while the large sinuses, which might suffer more, are protected by tough dural sheaths. E. C. S.

On the Relation Between the External Stimulus Applied to a Nerve and the Resulting Nerve Impulse as Measured by the Action Current. C. W. GREENE. American Journal of Physiology, I. (1898), 104-116.

Experiments were made on the excised nerves of frogs, terrapin, cats and dogs. The curves for the relation of the stimulating current and current of action, plotted from the results, show three stages: The first rising sharply from the abscissa and practically straight, the third also straight and nearly parallel to the abscissa, and the second, a curve with its concavity toward the abscissa, connecting the other two. The first stage extends from the smallest stimuli awakening any response up to the intensity required to bring out maximal muscular contractions and considerably beyond; it is the expression of an arithmetical ratio, each increase in stimulus bringing out a proportional and decided increase in the current of action. The third also represents an arithmetical ratio, but the increase for each unit of stimulus, while stlll proportional, is quite small. In the nerves of